

Docket No.: 1509-268

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	:
	:
Lawrence WILCOCK et al	:
	:
Serial No. Not yet assigned	: Group Art Unit: Not yet assigned
	:
Filed: herewith	: Examiner: N/A

For: AUDIO USER INTERFACE WITH MULTIPLE AUDIO SUB-FIELDS

PRELIMINARY AMENDMENT

Assistant Commissioner For Patents
Washington, D.C. 20231

Dear Sir:

Preliminary to examination of the above-referenced application, please amend the application:

IN THE CLAIMS:

Please amend claim 4 as follows:

4. (Amended) A method according to claim 1, wherein in step (b) the offset of each audio-field reference is independently controllable by a user input.

REMARKS


The above-referenced application is amended to delete the multiple dependency of claims 4.

Attached hereto is a marked-up version of the changes made to the claims by the current

amendment. The attached pages are captioned "Marked-Up Version Showing Changes".

Respectfully submitted,

LOWE HAUPTMAN GILMAN & BERNER, LLP


Allan M. Lowe
Registration No. 19,641

Date: January 29, 2002
1700 Diagonal Road, Suite 310
Alexandria, Virginia 22314
(703) 684-1111

CLAIMS

1. An audio user-interfacing method in which items are represented in an audio field by
5 respective synthesized sound sources from where sounds related to the items appear to
emanate, the method comprising the steps of:

- (a) setting the location of each sound source relative to an associated one of multiple
audio-field references;
- (b) independently controlling an offset between each audio-field reference and a
10 presentation reference determined by a mounting configuration of audio output
devices through which the sound sources are rendered in the audio field,
- (c) determining a rendering position for each sound source based on its location set in step
(a) and the offset of the associated audio-field reference;
- (d) rendering said sound sources at their associated rendering positions in the audio field.

15

2. A method according to claim 1, wherein in step (b) the offset of each audio-field
reference is controlled such as to stabilise the associated sound sources relative to one of:

- a user's head;
- a user's body;
- 20 - a vehicle in which the user is travelling;
- the world;

this stabilisation taking account of whether the audio output devices used to render the
sound sources are world, vehicle, body or head mounted, and, as appropriate, rotation of
the user's head or body, or turning of the vehicle.

25

3. A method according to claim 2, wherein the offsets of first and second ones of the
audio-field references are independently controlled to apply different respective
stabilisations to the sound sources respectively associated with these audio field references.

30 4. A method according to claim 1 ~~or claim 2~~, wherein in step (b) the offset of each audio-
field reference is independently controllable by a user input.